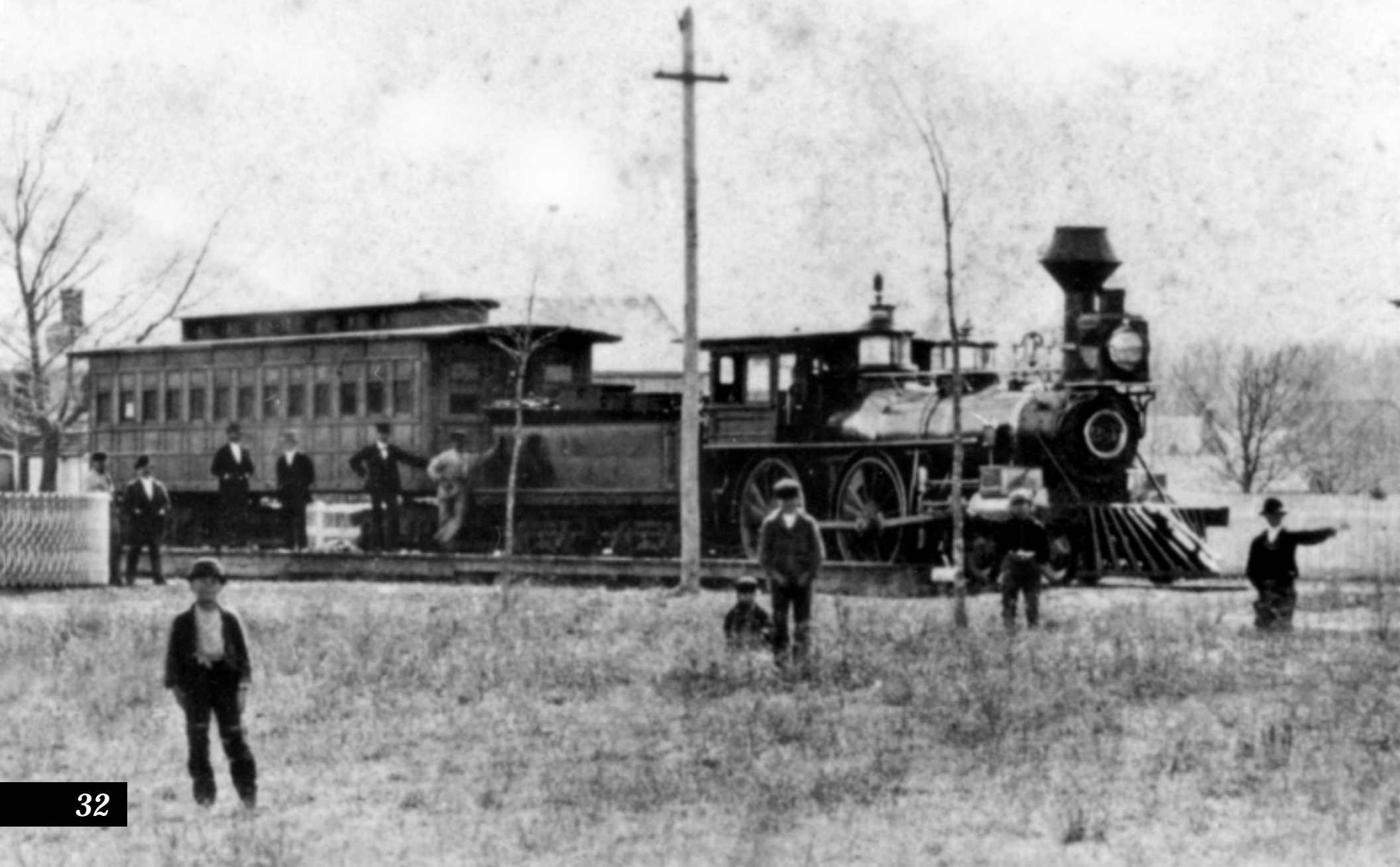


# DELAWARE'S



# RAILROADS 1827-1996



**T**he development of the railroad industry in Delaware mirrors that of the nation as a whole: railroads developed beginning in the late 1820s as a rapid, all-weather transportation alternative. They expanded their geographic range throughout the 19th century, fostering community development at transshipment points and transforming local economies by providing greater access to markets. Years of overbuilding left railroads vulnerable to outside forms of competition, particularly motor vehicles operating on improved highways, which by the mid-20th century undercut the dominance of railroads as the major long-distance transportation system. Delaware railroads, like railroads throughout the country, restructured in the face of competition becoming parts of consolidated systems that continue to play a prominent role in the state's economy.

The impact of the railroad industry is large, eco-

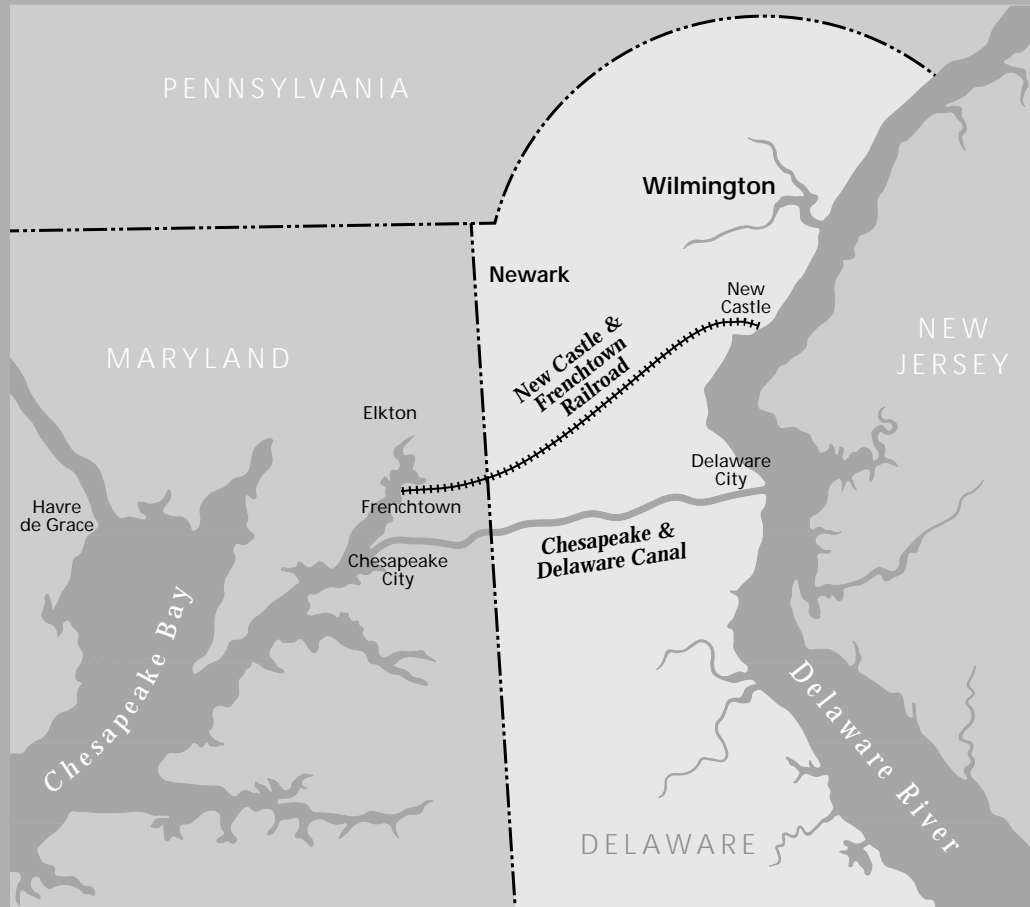
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*The Delaware Railroad, established in the late 1850s, opened southern Delaware's agriculture to new markets. The railroad chose to locate inland away from the colonial towns and villages that had been founded on navigable waterways nearer the bay. Here, a train stops at Felton, Kent County, one of the many towns that grew with the railroad.*

nomically, socially, and politically. Railroads helped Wilmington grow as a manufacturing and trading center. Rail times and travel transformed the economy of lower Delaware, creating new towns and shifting the centers of commerce in established ones in the process. Their imprint remains large on the built environment in the form of depots, towers, office buildings, shops, bridges, rights-of-way and signal towers.

Through World War II one carrier dominated the Delaware railroad industry: the Philadelphia, Wilmington & Baltimore Railroad (PW&B) and its corporate parent, the Pennsylvania Railroad. The carrier converted the state's transportation system from water dependent to rail based and fundamentally altered the state's physical environment. Its impact stimulated the development of industrial corridors, agricultural warehouses, and processing sites along the rail line. The PW&B tied Wilmington and New Castle County into the megalopolis running from Washington, D.C. to New York City. Electrified in the 1920s & 1930s, the line, the nation's busiest rail corridor, continues to serve passengers today as part of Amtrak's Northeast Corridor. The PW&B's downstate extension, the Delaware Railroad, was the transportation spine for the state prior to the development of Delaware's state highway system. In its wake came

# Delaware's Canals & Railroads –1830



*The period from 1820 to 1860 has been called the “transportation revolution” by historians. It is noteworthy for the construction nationwide of hundreds of miles of railroads and canals. Delaware’s transportation revolution began in 1828-30 with the opening of a canal and competing railroad across Delaware’s northern neck. The Chesapeake & Delaware Canal and the New Castle & Frenchtown Railroad were built to speed travel between the Chesapeake and Delaware bays.*

towns, feeder rail lines, and roads that transformed the economy and environment. The Delaware Railroad continues as part of Conrail’s Delmarva section. The PW&B/Pennsylvania Railroad main line and the Delaware Railroad are significant on a state level. The Pennsylvania Railroad main line also has national significance in association with the electrification project of the 1920s and 1930s.

Other railroads have played a part in the Diamond State’s development, including the Baltimore & Ohio (B&O), the Reading, and a number of smaller carriers feeding traffic to the Pennsylvania and Delaware railroads. None had the formative, long-term impact on the state of the PW&B-Pennsylvania, and all should be considered local in importance. This includes the B&O, one of the “Big Three” mid-Atlantic carriers (along with the Pennsylvania and New York Central), whose operations in Delaware were restricted to passenger operations and one minor freight line.

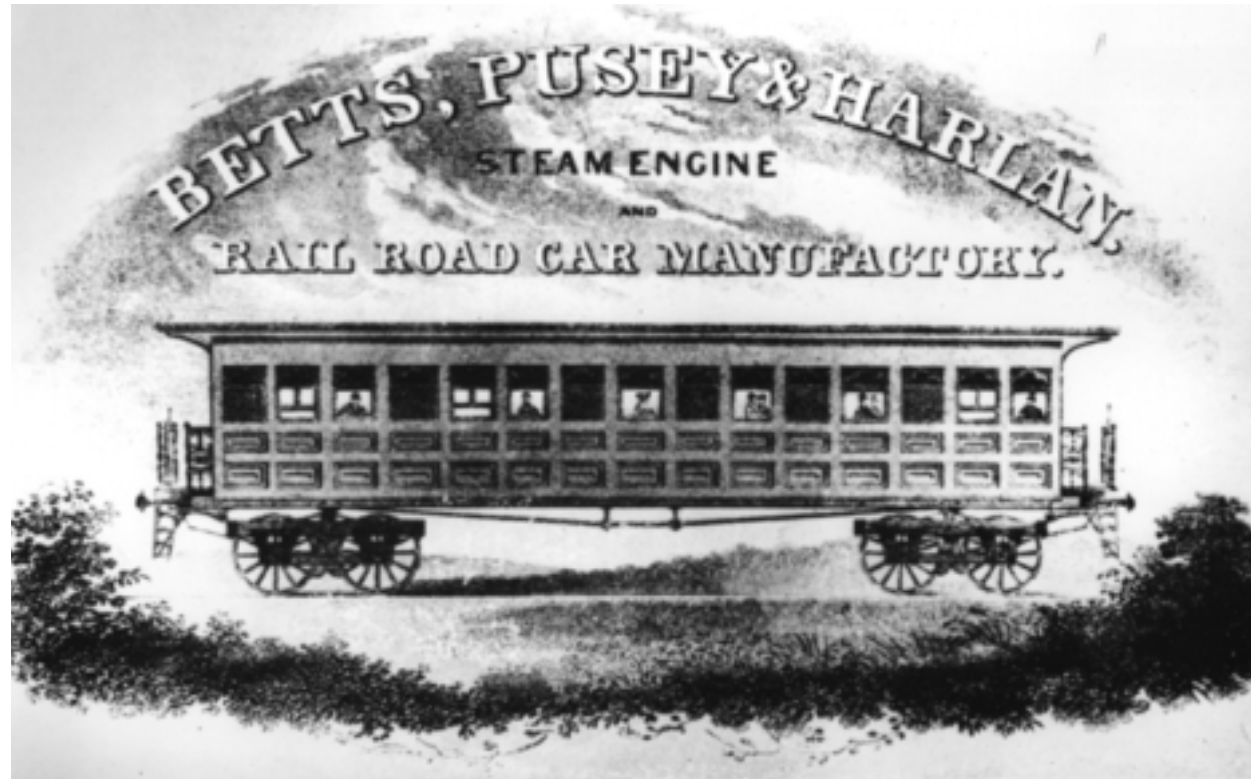
## Early Railroad Development in Delaware

**R**ailroading in Delaware began as part of an attempt to link the major cities of the eastern

# Delaware's Railroads

seaboard, including Wilmington, through a reliable, year-round transportation network. Delaware's first railroad line actually began as a turnpike. In 1811, the New Castle & Frenchtown Turnpike (NC&F) opened an improved, 16-1/2 mile long road across the First State's northern neck between Frenchtown on the Elk River in Maryland and New Castle on the Delaware. The roadway linked together steamboat operations on the Chesapeake and Delaware bays and formed part of a transportation route between Baltimore and Philadelphia. The graded turnpike was converted to a railroad in 1830 in order to more effectively compete with the Chesapeake & Delaware Canal, opened in 1828 between the two bays. Key capital for the reorganized NC&F came from Philadelphia and Baltimore financiers interested in improved transportation between their cities.

The NC&F was an instant success. The steam-powered railroad leg cut the travel time between Baltimore and Philadelphia, but the need to transfer freight from boat to railroad car and the difficulty of navigating on the Chesapeake and Delaware bays in



***Wilmington's industrialists became key suppliers to the railroad industry after the PW&B opened its line in the 1830s. Betts, Pusey & Harlan, later Harlan & Hollinsworth, helped build the city's reputation for railroad cars.***

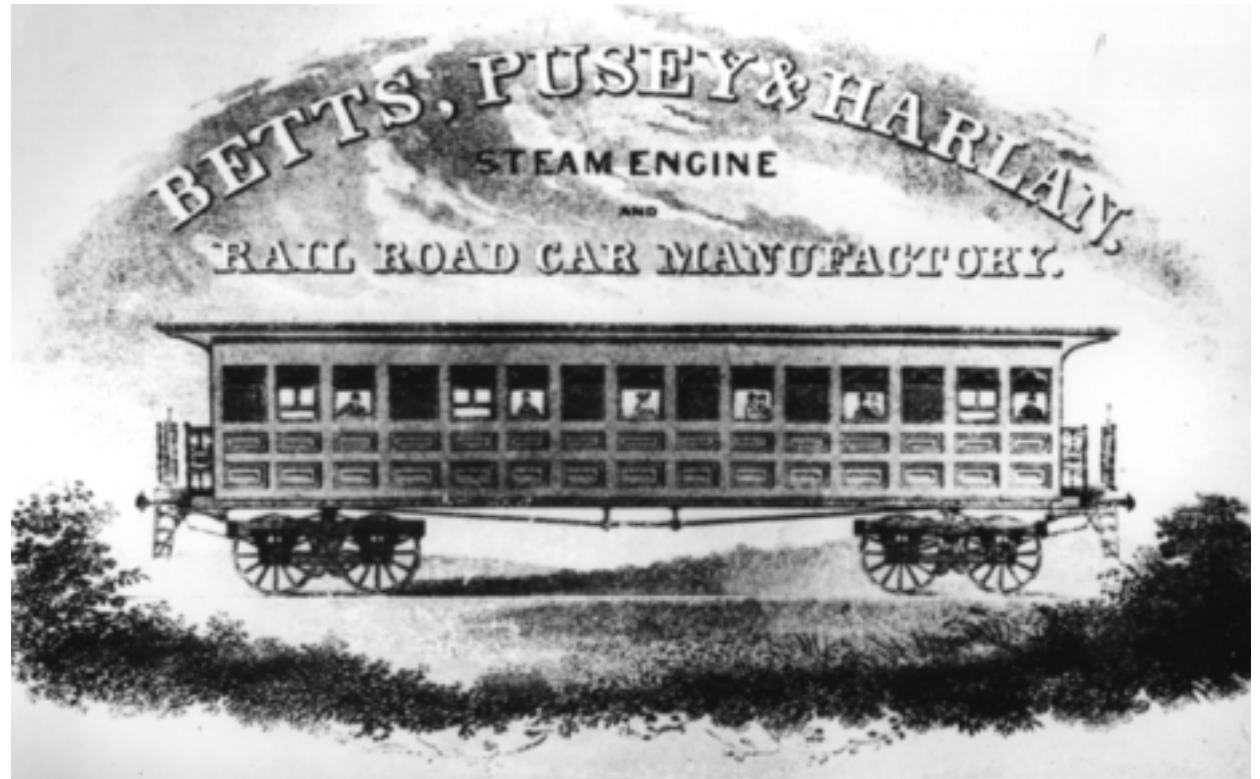
winter proved to be the line's undoing. In 1832, Wilmington interests chartered the Wilmington & Susquehanna Railroad, the Delaware portion of a rail line slated to run between Baltimore and Philadelphia. By 1843,

the integrated Philadelphia, Wilmington & Baltimore Railroad, successor to the Wilmington & Susquehanna, had assumed control of the NC&F, relegating it to branch line service. The westernmost nine miles were

# Delaware's Railroads

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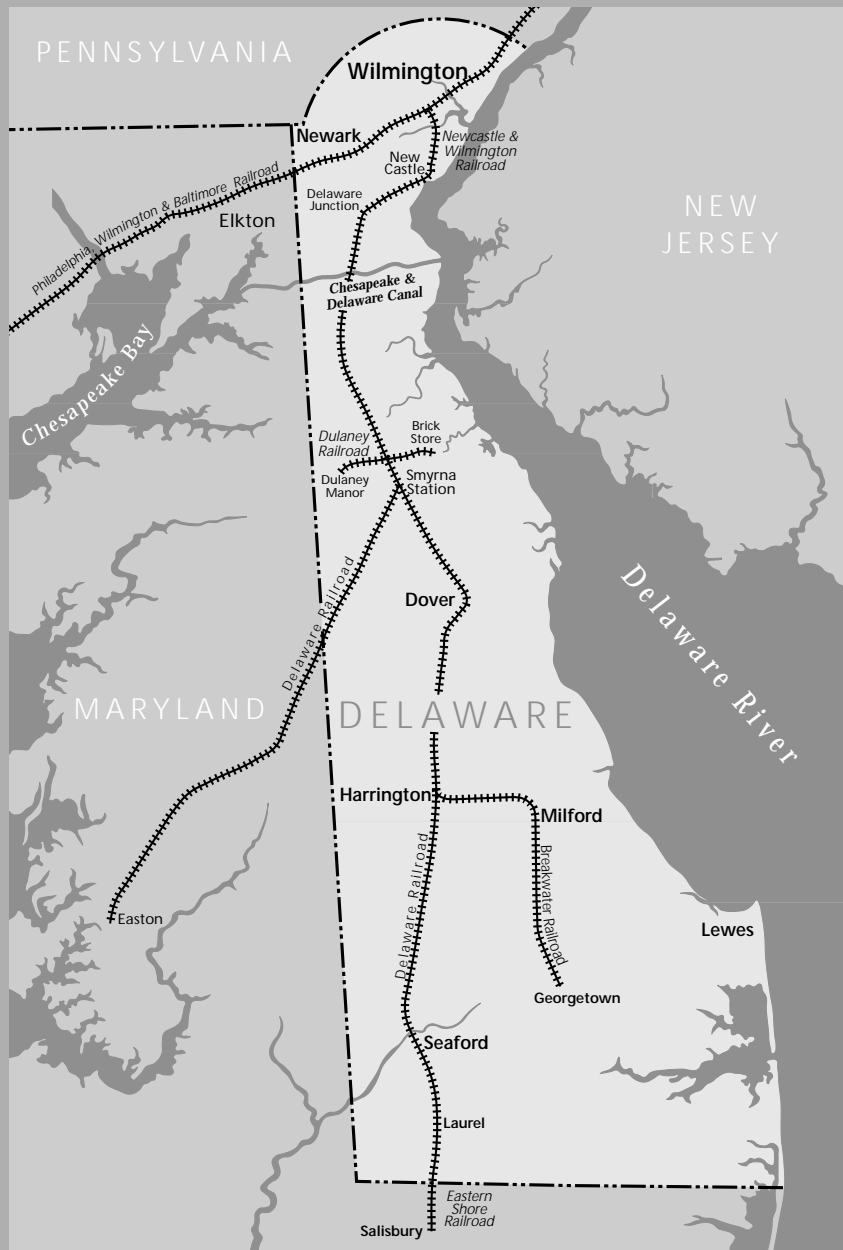


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# Delaware's Canals & Railroads –1860



**By 1860, the Philadelphia, Wilmington & Baltimore Railroad and the Delaware Railroad were established as the state's two leading railroads.**

abandoned in 1857. The remainder of the old right-of-way was used as part of the link between Wilmington and the downstate Delaware Railroad. Six original miles are still in use today as part of Conrail's New Castle Secondary line.

## **A Near Monopoly:** *The Philadelphia, Wilmington & Baltimore Railroad*

**C**onstruction of the all-rail route between Baltimore and Philadelphia began in 1837. Chartered as four separate companies, the lines merged in 1840 to form the Philadelphia, Wilmington & Baltimore Railroad (PW&B). The PW&B would dominate Delaware railroading for the next 45 years by offering two essential services: a fast, dependable all-weather route between Washington and New York, and reliable transportation linking Delaware with markets in the Northeast and the world.

The all-rail route between Baltimore and Philadelphia and through northern Delaware was opened in 1838, but engineering mistakes and poor economic decisions threatened the line's existence. In the late 1840s, the PW&B verged on bankruptcy. New management, however, engineered a dramatic turnaround, relaying the line with heavier T rail, contracting for better loco-

# Delaware's Railroads

motives and cars, building new stations, and improving the quality of service. By 1850, the PW&B was well-run and a crucial link in a rail route between Washington and the north.

Economically, the PW&B had a profound economic impact on Wilmington and northern New Castle County. The railroad opened new national markets to Wilmington's growing manufactories, a real boon to a city often caught in the shadow of Philadelphia, its larger neighbor to the north. Wilmington became a key supplier to the burgeoning railroad industry, spurring the growth of such firms as Diamond State Iron, Lobdell Car Wheel Company, and railroad car manufacturers, Jackson & Sharp and Harlan & Hollinsworth. Convenient transportation and proximity to other businesses made the narrow strip of land between the PW&B tracks and the navigable Christina River through Wilmington prime industrial territory. The PW&B relocated their own repair shops there after 1865, replacing an earlier complex on Walnut between Water and Front streets. The shops continually expanded throughout the late-

19th and early 20th centuries, employing greater numbers of people as they did. Thus, the railroad made both direct and indirect contributions to the development of Wilmington's economy.

## Expansion Downstate:

### *The PW&B and the Delaware Railroad*

The success of the PW&B provoked some interest in constructing a railroad linking Wilmington with Delaware's downstate counties. The state granted charters in 1836 and again in 1849, but financial backing could not be found. During the mid-19th century, water remained the primary means of downstate transportation. Maintained roads generally led to docks. Farmers in southern Delaware on the whole favored the development of

the Chesapeake & Delaware Canal as a transportation outlet over the nascent railroad industry, which seemed to benefit only New Castle County.

In 1852, with another railroad charter company floundering, the state stepped in, subscribing 5,000 shares of stock of the pro-



***In 1859, the Delaware Railroad extended its route south from Seaford. The railroad crossed the Nanticoke River on a wood girder bridge with a movable span to permit the passage of ships. This view was taken in the late-19th century.***



***Bird'seye View of Wilmington, 1874. The heart of the city's transportation system, the Philadelphia, Wilmington & Baltimore Railroad, is shown in the foreground. The railroad connected Wilmington with the East Coast's major cities. The Christina River wharfs are still thriving, but their role would become increasingly marginal to the railroads. Note the two movable bridges over the river.***

posed Delaware Railroad. The following year, the PW&B and the du Pont family stepped in to guarantee the Delaware Railroad's bonds. The PW&B formally leased the road in 1855 and, from 1857 on, operated the line as its Delaware Division.

With PW&B backing, construction proceeded quickly. The Delaware Railroad chose a route through the western side of the state, bypassing established towns in favor of easier engineering and potential business from Maryland's eastern shore. The new

line proceeded south from Wilmington via a junction with the old NC&F between Bear and Glasgow. (The PW&B had built a railroad connecting New Castle and Wilmington in 1852.) Dover was reached in January 1856, and Seaford, the original finishing point,



# Delaware's Railroads

by the end of the year. In 1859, the line was extended to Delaware's southern boundary and a connection with Maryland's Eastern Shore Railroad in the new town of Delmar.

The railroad transformed lower Delaware, improving transportation, providing greater access to market for agricultural and other products, and tying northern and southern Delaware together through a common technology. Trade moved inland, away from tidewater areas, with new towns growing up at the railheads, including Cheswold, Felton, Viola, Wyoming, Harrington, Greenwood, and Delmar. Equally dramatic was the change to southern Delaware's economy. The lumber stands of southwest Delaware were exploited for hardwoods. Farmers began experimenting with perishable products that could now move more rapidly to market via the railroad. Peaches quickly became downstate Delaware's largest cash crop. In Kent County, income from peaches jumped from \$10,000 to \$500,000 in just two decades. The peaches, melons, and early spring vegetables were destined for northern markets, which could enjoy fresh produce in season thanks to the railroad's more rapid transportation.

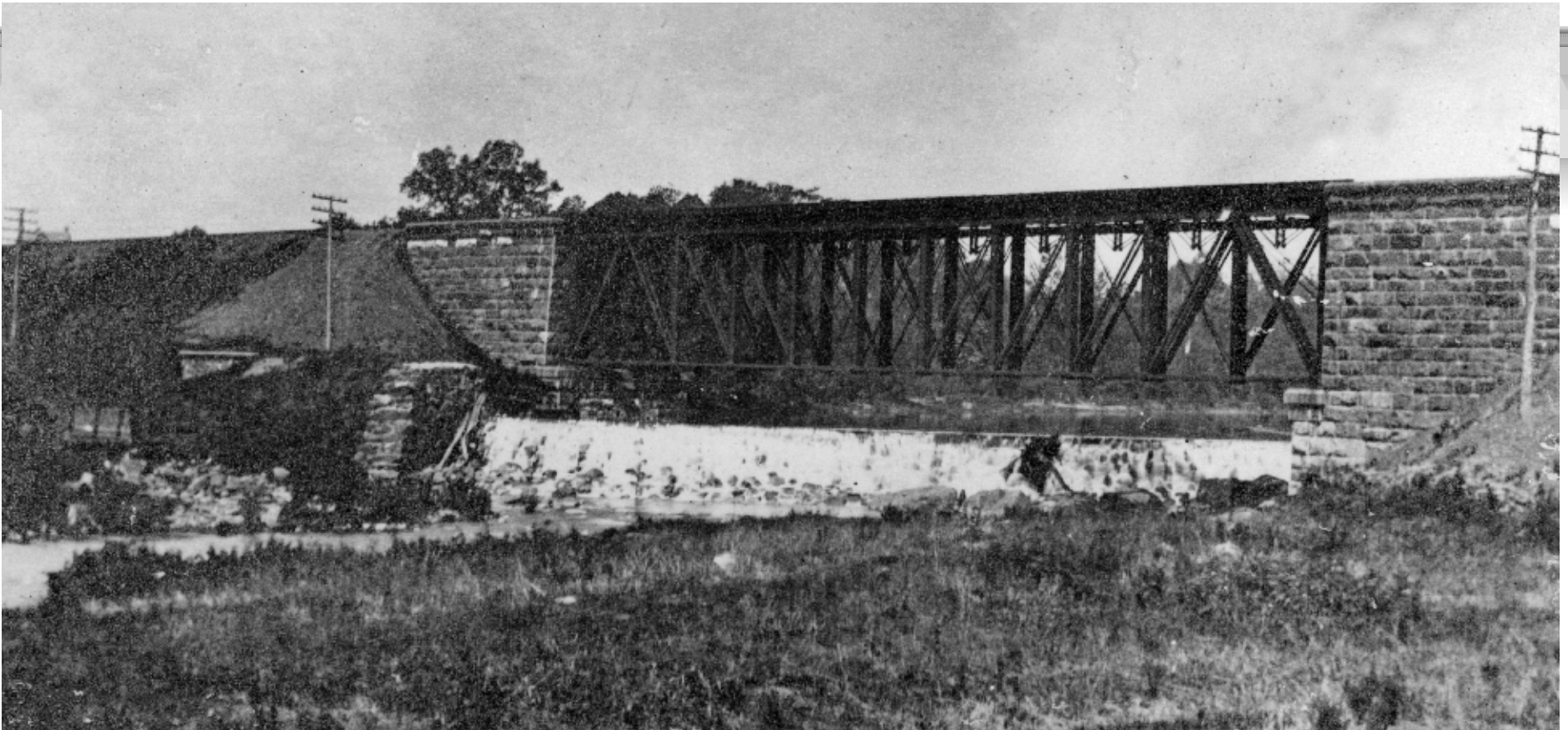
With its main line to the south completed, the Delaware Railroad turned its attention to building or gaining control of the rail lines branching from its stem. The Junction & Breakwater, running from Harrington to Lewes, was completed in 1869 and then extended to Rehoboth by 1878. A branch from Georgetown to the state line at Selbyville was completed in 1874. In 1883, the line was renamed the Delaware, Maryland & Virginia Railroad (DM&V). The rail connections helped spur the development of fish oil processing near Cape Henlopen. The DM&V was an important second freight line in southern Delaware for the Delaware Railroad. It also brought vacationers to Rehoboth Beach.

Other branches fed the Delaware Railroad freight business and passengers from Maryland's fertile Eastern Shore. Lines ran from Symrna to Oxford, Maryland (1871); Townsend to Massey's Crossing and Centreville, Maryland (1867); and Seaford to Cambridge, Maryland (1867). The last, which carried agricultural products, timber, and seafood, was reputedly the most valuable freight route on the Delmarva peninsula. Oversight of the branch lines

gave the railroad control over most of the freight emanating from the peninsula. Because of the relatively flat topography, the branch lines offered the railroads few significant engineering challenges and few major stream crossings requiring other than the standard bridge technology. The railroad branch lines, like those everywhere, had an impact on local economies, linking formerly isolated communities more closely with other towns and urban areas served by the integrated rail system.

## Controlling the Delaware Corridor

The railroad industry boomed following the Civil War with rail lines reaching all corners of the country. Railroads evolved into the nation's first "big business," assuming control of vast holdings of capital, real estate, equipment, and employees. The railroad industry grew from 30,000 miles of track in 1869 to more than 200,000 miles by 1900. As it did, the railroads moved to standardize operations, gradually eliminating the multiplicity of gauges that had plagued the industry during the Civil War in favor of the standard gauge of four feet



*The B&O Railroad bridge over Red Clay Creek near Kiamensi, ca. 1885. The pin-connected Pratt truss bridge type and design was an industry standard. This bridge no longer exists.*

eight-and-one-half inches. At the same time, the railroads upgraded their physical plant, replacing iron rails with heavier steel ones, wood and iron bridges with stronger steel and stone spans, wooden cars with steel, and early locomotives with larger, more powerful varieties. Roadbeds were realigned, graded, and reprofiled for the heavier and faster equipment. The railroad industry pioneered such business techniques as decentralized management, cost

accounting, electronic telecommunications, and engineering standardization in order to manage their complex, far-flung enterprises. The railroad industry became the dominant form of transportation and the model of modern business enterprise.

In this supercharged atmosphere, the populous Washington to New York corridor took on new importance with the centrally located PW&B the linchpin in the heavily traveled transportation route. The

rival rail lines that moved trains over the PW&B, the Baltimore & Ohio and the Pennsylvania, each sought control over the system. In February 1881, the B&O announced that it had purchased the PW&B. The declaration, however, proved premature. The Pennsylvania Railroad countered with a higher offer, wrestling control from its competitor and securing a direct connection between Washington, D.C. and New York harbor. The PW&B and the



# Delaware's Railroads

Delaware Railroad were now part of the Pennsylvania Railroad's vast system stretching from New York westward to Chicago.

Rather than concede the Washington-to-New York traffic to the Pennsylvania, the B&O, at great expense, built a parallel, double-tracked line to Philadelphia between 1883 and 1890. It linked up with the Jersey City line of the Reading Railroad. The route required the construction of many bridges, including truss bridges over the Brandywine at Wilmington and the Susquehanna near Havre de Grace, Maryland. The B&O also assumed control of the Wilmington & Western Railroad, a line founded in 1871 to service Delaware's Red Clay Creek Valley. The B&O's line generated little freight business, although passenger traffic initially was fairly healthy. The B&O's decision to expend capital on a new line rather than concede traffic to the Pennsylvania is an example of overbuilding that plagued the railroad industry in the 1880s and 1890s. This multiplicity of railroad lines would, in the long run, have a calamitous effect on the railroad industry.

## Completing Delaware's Railroad Map

A number of other railroads were founded in Delaware during the period of expansion, including the Wilmington & Northern, the Pennsylvania & Delaware, the Baltimore & Delaware Bay, and the Maryland, Delaware, & Virginia. None were as significant on a national or statewide basis as the PW&B or the Delaware Railroad. They were smaller players in Delaware's economy, serving primarily local needs and generally feeding traffic to the Pennsylvania and the B&O systems. In place by the beginning of the 20th century, they completed the Delaware railroad map that remained in place until the restructuring of the post-World War II years.

The Wilmington & Northern, running from Birdsboro, Pennsylvania, south through Wilmington to the Delaware River, began in 1866 as the merger of two smaller lines. In 1874, the line was extended north to Reading. It was absorbed into the railroad of the same name ca. 1899. The Wilmington & Northern was formed to bring an-

thracity coal to Wilmington's manufactories for fuel and to the docks for export. Its performance, while adequate, never matched expectations. The Wilmington & Northern also switched out the towns and industries of the Brandywine Valley, connecting with the Pennsylvania Railroad at Octoraro, Pennsylvania.

The Pennsylvania & Delaware, a branch of the Pennsylvania Railroad, originally ran from Pomeroy, Pennsylvania to Delaware City, Delaware, where its backers planned a large coal wharf. Founded in 1869, it was a relatively unimportant branch of the Pennsylvania Railroad by 1873. It was placed under PW&B control following Pennsylvania Railroad purchase of that line. The portion east of Davis Tower in Newark was renamed the Newark & Delaware City, and the section between Davis Tower and the Pennsylvania border was designated the Pomeroy & Newark.

Delmarva's expanding peach and produce harvests of the late-19th century spawned a rail line that briefly competed with the Delaware Railroad for the freight business. In 1879, railroad financier Jay

# Delaware's Railroads –1870

*By the late 1870s, the Delaware railroad map was nearing completion with branch lines from the Delaware Railroad servicing downstate and several small lines running north from the Philadelphia, Wilmington & Baltimore Railroad to points in south-eastern Pennsylvania.*



Gould and the Southern Railroad of New Jersey purchased an existing rail line running from Pierson's Cove/ Bombay Hook, Delaware, to Chestertown, Maryland. For one season, it operated a car ferry service between Bombay Hook and Bayside, New Jersey. But with the Jersey Southern's bankruptcy the following year, the line came under the control of the Central of New Jersey, who used it primarily to ferry passengers to a resort at Woodland Beach and excursion boats bound for Cape May. In 1902, being a very minor line, it was merged into the Delaware Railroad.

The Maryland, Delaware & Virginia, running from Love Point on the Chesapeake Bay to Lewes on the Delaware, was chartered and built between 1894 and 1898 as the Queen Anne's Railroad. In Delaware, the

line ran through Greenwood, Ellendale, and Milton to Lewes. The line came under Pennsylvania Railroad control in 1905. Sold at foreclosure in 1923, the MD&V operated as the nominally independent Maryland & Delaware Coast, although its right-of-way continued to be owned by the Pennsylvania. The line has local significance during the period of 1898-1931 for its role in bringing vacationers from Washington and Baltimore to Rehoboth Beach, helping to make the town a popular resort.

With the founding of these lines, the railroad map of Delaware was essentially complete. Routes would be realigned and certain tracks abandoned due to business exigencies. More would be built in and around Wilmington as cut-offs to relieve congestion and to service a new yard at

# Delaware's Railroads

Edgemoor, but the map would change little substantively until late in the 20th century.

## Railroad Consolidation and Expansion, 1881-1945

Following its purchase of the PW&B, the Pennsylvania Railroad moved to consolidate and expand its Delaware holdings. Beginning in 1884 the important line between Washington and New York, including the Newark to Wilmington corridor, was double tracked. The Pennsylvania also moved the Delaware Railroad's headquarters and shops to Clayton, a relatively new town founded with the coming of the railroad. Clayton would become lower Delaware's largest railroad center. The Pennsylvania Railroad's extensive holdings made it the largest landowner and taxpayer in the state and a key player in statewide politics.

The Delaware Railroad held particular value for the Pennsylvania Railroad at this point. The Pennsylvania saw the road as a potentially direct and relatively short conduit between southern agriculture and northern markets. In 1894, the Pennsylvania



***The roundhouse at Delmar serviced steam locomotives for the Delaware Railroad, a subsidiary of the Pennsylvania Railroad, important for its role in the transport of fruits and vegetables to northern markets. By the time this photo was taken in about 1950, steam locomotives were being taken out of service in favor of diesel and the trucking industry had taken a substantial percentage of the railroad's traffic in perishable produce.***

purchased and completed the New York, Philadelphia, & Norfolk (NYP&N), which connected the Delaware Railroad at Delmar with Cape Charles, Virginia, across the Chesapeake Bay from the thriving port of Norfolk. By instituting a car ferry service, the Pennsylvania created an alternative route to New York for southern produce,

especially early vegetables, berries, peaches, and other fruits, as well as for tobacco, cotton, and Chesapeake Bay oysters. The NYP&N's purchase had a residual effect on agriculture in Kent and Sussex counties. As the line and its Delaware Railroad connection became more important to the Pennsylvania, it opened new markets for all



***The Pennsylvania Railroad's Northeast Corridor ran at grade on the streets of Wilmington prior to 1901. Gates guard the tracks in front of the station but these did not always deter pedestrians or wagons, sometimes with deadly consequence. The railroad found the conflict between street and railroad traffic in Wilmington and other cities inefficient to its own operations, while city fathers pressured the railroad to get its tracks out of the streets for safety's sake. The railroad built a new station and four-mile long, grade-separated, stone arch and steel girder viaduct from 1901 to 1907.***

products along the line, including Delaware peaches, melons, and strawberries. The expanded truck farming in lower Delaware, in turn, spurred a growth in the cannery industry throughout the state. The Delmarva freight lines were among the most profitable on the Pennsylvania Railroad system

in the early 20th century.

To better control its expanded Delmarva operation, in 1901 the Pennsylvania reorganized its Delaware holdings into a new company, the Philadelphia, Baltimore & Washington, a wholly owned subsidiary of the Pennsylvania Railroad. The name change

reflected, in part, Wilmington's declining position after 1890 as a manufacturing center. Changing markets and less dynamic business leadership altered Wilmington's economic base away from intensive industry. Wilmington remained, however, an important railroad town and northern Delaware a vital part of the northeast transportation corridor.

With its corporate house in order, the Pennsylvania Railroad embarked beginning in 1902 on a substantial and wholesale rebuilding program designed to bring its Delaware holdings up to the company's engineering standards. New Castle County saw the bulk of the improvements, from relaying and regrading of track to the adoption of the Pennsylvania's trademark stone construction for bridges and stations on its main line. Wilmington, between 1901 and 1907, saw the construction of a historically significant, four-mile long stone arch and steel-girder viaduct to eliminate grade crossings by carrying the tracks above street level through town. Other construction included a new station, office building,



# Delaware's Railroads

powerhouse complex, freight depots, a swing span bridge over the Brandywine River, a new freight yard, and expansion and construction of new shops at the old PW&B facilities in Wilmington. In order to speed operations and increase traffic capacity, the track system from Newark to Wilmington was expanded from two to four.

The B&O followed suit in 1910, opening in a graceful, technologically significant, seven-arch stone viaduct over the Brandywine River in Wilmington. Its original 1885 deck truss bridge remained in place and was rebuilt in 1920 as the Augustine Cutoff highway bridge. The deck truss was replaced in 1980. In 1918 the B&O also rebuilt and expanded the Wilsmere Yard outside of Wilmington to more easily accommodate the switching of freight trains bound for New York.

## Electrification of the Northeast Corridor

**T**he most significant improvement to rail operations in the region began in 1910

when the Pennsylvania Railroad constructed electrified tunnels under the Hudson and East Rivers, providing for the first time direct access to New York City. (Previously, trains transferred to car ferries at Jersey City and were floated across New York harbor). Pleased with the results, the Pennsylvania boldly decided to electrify its entire line between Washington and New York, the nation's busiest transportation corridor, believing that the unprecedented proposition, expensive in the short run, would provide long-term economies of scale.

The electrification project started in New Jersey and along several Philadelphia commuter branches in 1915, with plans to extend electrification by stages southward to Washington, D.C. The mammoth undertaking required erecting over 325 route miles and 1,300 track miles of catenary; relaying all four tracks with heavier, high-speed rail; rebuilding bridges for heavier, faster loads; reconstructing signal bridges, and, at grade-crossing underpasses, erecting fences to keep the public from throwing debris on the track and catenary. Railroad

and highway bridges crossing the line had to be raised as needed to provide sufficient space for wires. The Philadelphia to Wilmington portion was begun in 1926 and completed by 1928. The Pennsylvania completed the line south of Wilmington in the depths of the Great Depression with \$45 million secured from the New Deal's Public Works Administration. The loan was called the most productive ever made by the PWA. Through electrical passenger service was inaugurated in February 1935, with electrified freight service beginning three months later.

The large-scale electrification of main line service was a stupendous engineering feat. It changed the complexion of railroading in northern Delaware and dramatically altered the physical environment in ways that remain today. High-speed trains expanded passenger travel in the corridor, which generated more passenger miles than any other main line of comparable length. The improvements would keep the railroad corridor viable long after passenger service had declined in other areas of the country.



*Electric locomotive GG1 No. 4800 of the Pennsylvania Railroad stops at the Wilmington station ca. 1935. The rail line from Philadelphia to Wilmington was placed under wires in 1928. Electrification was extended south to Washington, D. C. in 1935. The conversion of the line from a steam railroad to an electrified railroad was a significant engineering achievement. Electric locomotives accelerated faster, and had lower operating costs, higher dependability, and cleaner operations than steam locomotives. Power is delivered to the electric locomotives by an extensive network of overhead wiring called catenary.*

# Delaware's Railroads

Electrification severely undercut passenger service on the rival B&O, which had trouble competing effectively with the direct, high-speed service. This, too, would have long-range implications for railroading in Delaware. Electrification tied Wilmington ever more firmly into a megalopolis stretching from Washington, D.C. to New York. Wilmington became the Pennsylvania's main repair shop for electric locomotives, a role that continues today with Amtrak, assuring the shops' continued existence and securing Wilmington's future as a railroad town.

## Restructuring in the Railroad Industry, 1917-1946

The Pennsylvania's decision to electrify was driven, in part, by growing problems in the railroad industry. Railroads have always been a business of comparatively modest profits, with high fixed costs tied up in essential holdings like rights-of-way, track, bridges, locomotives and cars, stations, warehouses and other fixed structures. The large holdings, in turn, subjected



*The railroad and the automobile were uneasy partners. In the 1920s, the state highway department took this photo at Coolspring Station to illustrate the dangers of at-grade crossings. Mangled cars and trucks made even more graphic presentations. State highway engineers realigned the roads and built overpasses to eliminate many of the most dangerous crossings as but one part of a massive effort to improve the nation's highways. The huge federal and state subsidies to highways made possible longer distance automobile and truck travel eventually undercutting the railroad's economic position.*

the railroads to an equally large property tax load, a burden that was increased, often beyond what could be justified by traffic, during the overbuilding of the 1880s and 1890s. Competition, like the parallel B&O and Pennsylvania lines through northern

Delaware, assured that the rates railroads charged shippers would remain comparatively low. Moreover, arcane, government-regulated, freight-pricing structures established maximum and minimum acceptable rate levels, rather than letting the carriers set



***The Wilmington & Northern Railroad's car repair shops in Wilmington, like those of many other railroads, were closed and abandoned as the railroad industry fell into economic collapse in the 1960s and 1970s.***

them based on competition, commodity, and distance. The railroad industry remained profitable as other costs and competition from outside forms of transportation remained static, but its position was precarious.

And competition was increasing from trucks and automobiles, as states began developing highway systems. Coleman du Pont's innovative DuPont Highway began in 1911 and was heavily subscribed by Kent and Sussex counties farmers that were only too glad to have an alternative to the Pennsylvania Railroad's near monopoly on

downstate transportation. Road building activity increased following the passage of the Federal Highway Act of 1916. America's entry into World War I exacerbated the railroad's woes as more and more shippers, exasperated with railroad car shortages and freight bottlenecks, turned to the nascent trucking industry for short and medium-distance hauls over the nation's improving road and highway system.

The situation improved for the railroads during the 1920s. Railroad companies, led by the Pennsylvania, reorganized ruthlessly,

consolidating shop operations (a process helped by electric locomotives, which require less maintenance than steam engines), reducing employment, and rolling back wartime union gains. But competition from private automobiles, trucks, barges, and pipelines continually increased. Trucking offered the advantage of door-to-door service, eliminating the long delays associated with shifting railroad cars in freight yards and cargo between cars and destinations. Delaware's improved roadways undercut railroad passenger usage, as people in the prosperous postwar years turned to the increasingly affordable automobile for their transportation needs.

The Great Depression worsened the situation, with freight and passenger traffic slipping to an all-time low. With the notable exception of the Pennsylvania's electrification project south of Wilmington, the railroads deferred maintenance on track and other physical structures to spread already thin revenues. The Pennsylvania continued to turn profits and pay dividends, but shipments along its Delaware freight routes slipped. From this point forward, down-



# Delaware's Railroads

state Delaware freight would play a declining role in the Pennsylvania Railroad empire. But the situation was worse on the rival B&O, which tottered on the edge of bankruptcy.

With America's declaration of war in December 1941, the lean years of the Depression became a distant memory. Troop train movements, decreased ship activity along America's coasts, and restrictions on automobile travel thrust the transportation burden back onto the railroads. Freight and passenger volumes skyrocketed, particularly in the industrial east. In Delaware, the Pennsylvania and B&O lines in the northern part of the state bore the brunt, as Wilmington industries switched to war footing and goods and war material moved to the ports of Wilmington, Philadelphia and New York. The railroads' wartime performance was lauded nationwide, but the glory would be short-lived.

## Railroads in the Postwar Years

**P**hysically, the railroad industry was in sorry shape by war's end. Increased traffic loads and a lack of replacement parts

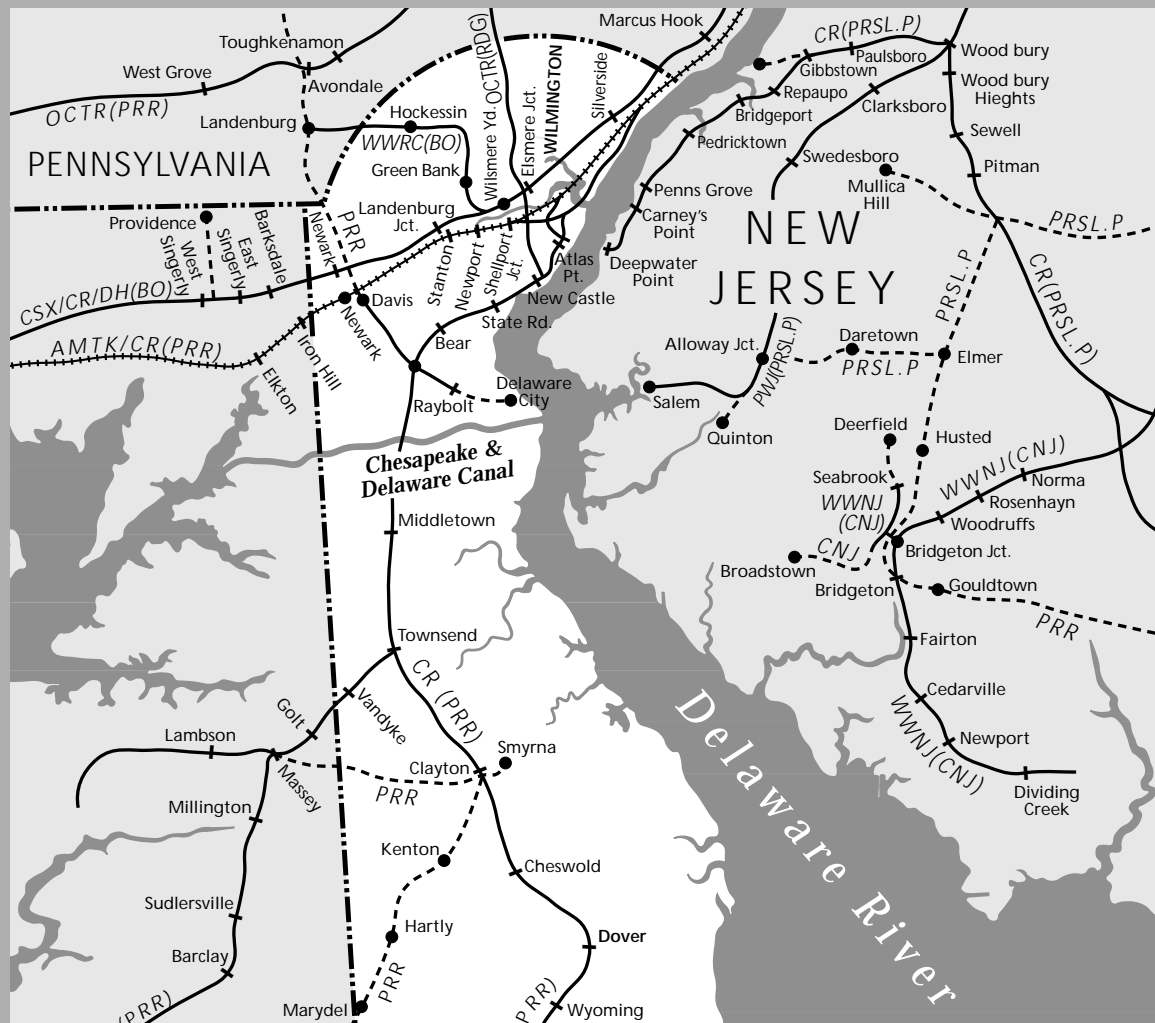
had punished track and equipment already suffering from the deferred maintenance of the Depression years. Outside competition was accelerating, with the trucking industry taking a growing percentage of the short and medium distance, high volume business that the railroad industry counted on to subsidize higher weight but less profitable goods like coal. Railroad attempts to establish their own trucking subsidiaries were found to violate anti-trust laws. The improved road system also spurred the growth of automobile suburbs, shifting passengers and businesses away from railroad corridors. The dramatic growth of the airline industry decimated long-distance railroad passenger traffic and made slow but steady inroads into the freight business.

The declining business, plus years of overbuilding and high-fixed costs, heavy debt loads, and declining business, left railroads with little or no money to upgrade routes and equipment. A painful restructuring began. Postwar passenger routes were the first victims. The Pennsylvania eliminated downstate passenger service on the branch lines

by 1949, and on the Delaware Railroad by 1965. Its dense, electrified corridor through northern Delaware remained competitive with the airlines even as equipment continued to deteriorate. The financially shaky B&O Railroad was less fortunate. Unable to compete with the Pennsylvania, it ended passenger service in the corridor in 1958.

The Pennsylvania's Delaware freight business fell off steadily. The Delmarva peninsula had relatively few heavy industries, and the perishable agricultural commodities that formed the backbone of the downstate business were most vulnerable to truck competition. Additionally, much of the intensive, weather sensitive crops shifted from Delaware to the longer growing seasons of the southern and western United States. Delaware's growing broiler chicken industry shipped primarily via truck, not railroads. All Delaware railroads – Pennsylvania, B&O, Wilmington Northern/Reading – eliminated unprofitable short-haul sidings and branches. Then, in 1956, the Pennsylvania downgraded the Delmarva line as a through route, removing one of the two tracks.

# Delaware Railroads –1995 *NORTH*



***Delaware-North, railroads as of 1995. Solid lines are in-service rail lines, hatched line is active electrified line, i.e. Northeast Corridor; dashed lines are abandoned rail lines. Key: AMTK=Amtrak; (BO)=historic B&O Railroad lines; CR=Conrail; CSX=CSX Transportation; MDDE=Maryland Delaware RR; OCTR=Octorara Railroad, now Delaware Valley RR; (PRR)=historic Pennsylvania RR lines; (RDG)= historic Reading lines; WWRC=Wilmington & Western RR.***

Source: Mike Walker, *Railroad Atlas of North America: Northeast USA* (Faversham, UK: Steam Powered Publishing), 1995.

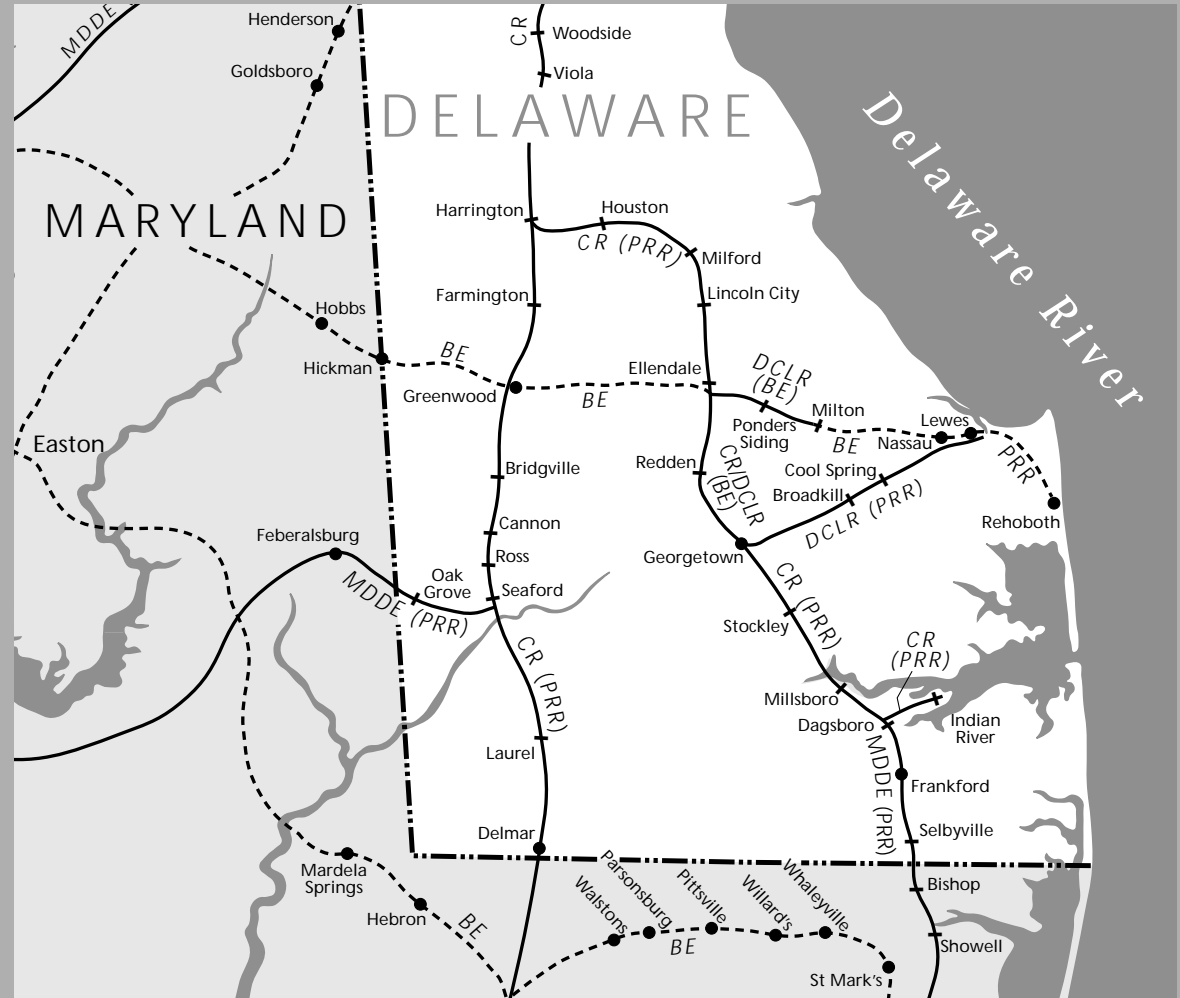
The railroad industry introduced a number of innovations that curtailed the decline and won some traffic back. Diesel locomotives on the B&O and the Pennsylvania Delmarva lines increased efficiency, allowing an engine to operate 28-30 days per month, rather than the 15-18 day limit of a steam locomotive. Equally important, joint ventures with the trucking industry revolutionized the industry. The introduction of piggyback trains (truck trailers on railroad flat cars), containers on flat cars, and unit trains (trains shipped and routed as a unit, eliminating switching) won back for the industry some of the medium distance and long-haul freight business. Ironically, the introduction of the tri-level automobile car secured for the railroads the movement of automobiles from manufacturing plant and import point to its final destination. In the late 1940s, the proximity of the B&O and Pennsylvania rail lines was an important factor in the location of a General Motors Plant near Newport and a Chrysler plant at Newark.

The innovations slowed but did not halt the losses. Declining freight revenues and

massive debt forced the B&O, the nation's first common carrier, into a merger in the early 1960s with the Chesapeake & Ohio and Western Maryland railways, a union that eventually became known as the Chessie System. In 1968, the rival New York Central and Pennsylvania railroads completed a merger, forming the Penn Central Corporation. Delaware shippers worried how, if at all, their comparatively small business would fit into the giant corporation. But the unwieldy Penn Central collapsed in on itself within two years.

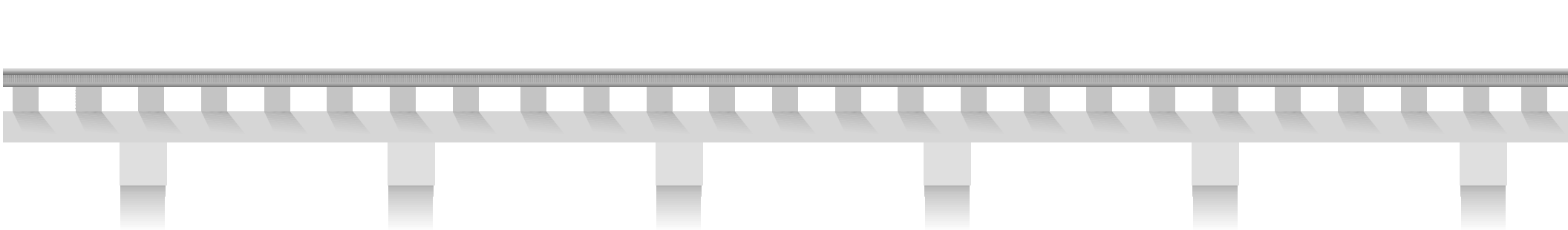
The Penn Central bankruptcy and the ailing condition of the industry in general convinced Congress that a legislative solution was needed. In 1970, Congress created the National Railroad Passenger Corporation, better known as Amtrak, to run the nation's passenger train service, including the Northeast Corridor through Delaware. Wilmington remained the heavy repair facility for locomotives used in the corridor. The Penn Central's freight side was reorganized, along with that of several other northeastern bankrupt railroads (including part of the Reading/Wilmington & North-

## Delaware Railroads –1995 *sOUTH*



**Delaware-South, railroads as of 1995. Solid lines are in-service rail lines, dashed lines are abandoned rail lines. Key: BE= Baltimore Eastern; CR=Conrail; DCLR=Delaware Coast Line RR; MDDE=Maryland Delaware RR; (PRR)=historic Pennsylvania RR lines.**

Source: Mike Walker, *Railroad Atlas of North America: Northeast USA* (Faversham, UK: Steam Powered Publishing), 1995.



ern tracks in Delaware), into a quasi-public company, the Consolidated Rail Corporation or Conrail. Conrail closed a number of railroad yards, including the one at Delmar.

The formation of Conrail and the creation of CSX Transportation through a merger of the Chessie and the Seaboard systems in 1980 produced a spate of abandonments of smaller feeder lines throughout Delaware and the Eastern Shore. Some were picked up by smaller carriers, some by the state railroad administration, and some by the state of Maryland. Partial deregulation of the railroad industry in 1980 with the passage of the Staggers Act finally gave the railroads the right to set rates competitively and to own other forms of transportation, like barge and truck lines. This has led to a boom in the intermodal business, particularly on routes of greater than 400 miles. It has also led to an improved climate for the railroad business.

Today, the railroad industry continues to be an important player in Delaware's economy and transportation picture. Traffic through New Castle County, both passenger and freight, is quite heavy, although most begins and ends elsewhere. Amtrak

passenger service, thanks to electrification, continues to serve Wilmington and the Northeast Corridor. Both Conrail and CSX Transportation carry freight along their historic routes in northern Delaware. Ironically, the former B&O line, historically the less significant of the two, now carries more annual freight tonnage than all of Conrail's Delaware lines and the short line railroads combined. The electrified, former Pennsylvania line cannot accommodate the intermodal container and trailers on flatcars trains, and it is predominantly used for Amtrak passenger line service. Trains from competitors, like Conrail and Norfolk Southern, as well as trains from the Canadian Pacific Railway, are routed over the CSXT line. Most of the freight on this line originates from outside of the Diamond State.

Conrail operates the former Delaware Railroad spine line as its Delmarva Secondary Track. Branches in New Castle County connect the line to the Port of Wilmington (the New Castle Secondary track) and the chemical plants in Delaware City (the Reybold Industrial Track). The branch east from the spine line at Harrington, his-

torically known as the Delaware, Maryland & Virginia, is now Conrail's Indian River Secondary Track as far as Frankford. The small amount beyond that in Delaware is run by the Maryland & Delaware (M&D), an independent railroad, for the Snow Hill Shippers association. The M&D also operates most of the smaller lines feeding traffic to Conrail, including the former Townsend Branch between Townsend and Chesterton and Centreville, Maryland, the former Cambridge branch between Seaford and Cambridge, Maryland, and the old Breakwater and Junction Railroad between Georgetown and Lewes, as well as its branch between Ellendale and Milton. The line through the Red Clay Valley between Wilmington and Hockessin is once again known as the Wilmington & Western; privately owned, it operates primarily as a tourist railroad business. The remnants of the former Wilmington & Northern/Reading Railroad line are now known as the Delaware Valley Railroad. A bridge route to shippers in Pennsylvania, the line generates no business in Delaware. ■

# Delaware's Railroads

*Wilmington & Northern Railroad, ca. 1870.*

